Abstracts

A Low Phase Noise C-Band Frequency Synthesizer Using a New Fractional-N PLL with Programmable Fractionality (Short Papers)

T. Nakagawa and T. Tsukahara. "A Low Phase Noise C-Band Frequency Synthesizer Using a New Fractional-N PLL with Programmable Fractionality (Short Papers)." 1996 Transactions on Microwave Theory and Techniques 44.2 (Feb. 1996 [T-MTT]): 344-346.

This paper presents a new fractional-N PLL that has an arbitrary denominator of the fractional division ratio as well as an arbitrary numerator and an integer part. This enables a reduction in the phase noise of frequency synthesizers for many applications with various channel-space frequencies. The circuit elements of this fractional-N PLL are fabricated in LSI's that operate up to 6.5 GHz. They have been successfully installed in a C-band frequency synthesizer with a low phase noise MMIC VCO.

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